

Applicant's invention of Claim 1 has red, green, and blue LEDs optically coupled to respective first, second, and third edges of a light guide, and the light guide includes "light directing elements" to direct the red light to the red pixel areas in the display, direct the green light to the green pixel areas in the display, and direct the blue light to blue pixel areas in the display. This invention is unrelated to any feature of the displays described in the five references. None of the references remotely suggests Applicant's "light directing elements." The examiner has provided no suggestion at all for Applicant's claimed "light directing elements" for the RGB components.

The examiner newly cites the Fullmer patent for its teaching of a white fluorescent bulb 26 being optically coupled to fiber optic strands 42. The other ends of the fiber optic strands act as "passive" indicator lights 34-40, 64-70, and 82-85. This teaching by Fullmer has no relation to Applicants' Claim 1 "light directing elements" to direct the red light to the red pixel areas in the display, direct the green light to the green pixel areas in the display, and direct the blue light to blue pixel areas in the display. In Fullmer, the fiber optic strands direct the white light from the bulb to areas away from the LCD screen for use as indicator lights. Accordingly, Fullmer adds nothing to the combination of Bruning, Hayashi, and Yoshihara.

The other newly cited reference to Kitai describes various backlights for LCD panels. Kitai neither discloses the arrangement of the red, green, and blue LEDs in Claim 1 or the claimed "light directing elements" to direct the red light to the red pixel areas in the display, direct the green light to the green pixel areas in the display, and direct the blue light to blue pixel areas in the display. Further, Kitai teaches away from using LEDs in backlights in paragraph 0056.

Accordingly, since Fullmer and Kitai add nothing to the combination of Bruning, Hayashi, and Yoshihara to suggest the "light directing elements" of Claim 1, the combination of the five references could not suggest Applicants' Claim 1 and dependent Claims 2-12. Accordingly, Claims 1-12 are respectively submitted to be patentable over the combination of the cited references.

The examiner also rejected Claim 15 over the combination of the five references, using the same arguments as with respect to Claim 1.

Applicant's independent Claim 15 recites a backlight that includes "a light emitting diode (LED) emitting light having a wavelength equal to or less than blue light, said LED

being optically coupled to said light guide." The backlight also includes "a plurality of first areas on first said surface of said light guide having a first phosphor material that, when irradiated by light emitted by said LED, generate a red light." The backlight also includes "a plurality of second areas ... having a second phosphor material that, when irradiated by light emitted by said LED, generate a green light." The backlight also includes "deformities formed in said light guide directing light from said LED toward said first surface."

The examiner rejected Claim 15 in view of the combination of Bruning, Hayashi, Yoshihara, Fullmer, and Kitai; however, the references, either alone or in combination, do not suggest: 1) the illumination of the red and green phosphors by an LED; 2) the "deformities" in the light guide; and 3) the "red and green light emitted by the first areas and second areas coinciding with red and green pixels in said display."

Bruning teaches the use of red, green, and blue LEDs, so could not possibly suggest Applicant's Claim 15. Yoshihara similarly teaches the use of red, green, and blue LEDs. Hayashi teaches the use of cold-cathode tubes 2, 4, which are understood to output white light. Fullmer teaches the use of a white light fluorescent tube as a backlight. And Kitai's most relevant embodiment teaches an electroluminescent backlight having EL phosphors, which does not use LEDs for their light emission. Kitai further teaches away from LEDs in backlights in paragraph 0056. Accordingly, the combination of the five references could not possibly suggest Applicant's Claim 15. Accordingly, independent Claim 15 and dependent Claims 16-18 are respectively submitted to be patentable over the combination of the cited references.

The examiner rejected independent Claim 13 as being obvious over the above combination of five references and further in view of Rand (U.S. 6,521,879). Claim 13 recites the method for using the color LCD of Claim 1. Rand teaches strings of LEDs throughout the backlight so could not suggest Applicant's LEDs coupled to the edges of the light guide, as claimed in Claim 13. For this and other reasons, Rand adds nothing of significance to the previously described combination of references. Accordingly, Claim 13 and dependent Claim 14 are allowable over the combination of references.

The examiner additionally rejected dependent Claims 10 and 11 as being obvious over the combination of the five references and further in view of Roberts (U.S. 2002/0191127 A1). The examiner cited Roberts simply for showing limitations in certain dependent claims but not for disclosing the invention in the independent claims.


Accordingly, there is no need to distinguish Roberts from the dependent claims since the independent claims have been shown to be allowable.

As seen, all claims are allowable over the references cited by the examiner.

Applicant respectfully requests a Notice of Allowance be issued. If the examiner's next action is other than issuing a Notice of Allowance, the examiner is respectfully requested to Applicant's attorney at (408) 382-0480 to further discuss the case.

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 12/2/03
Attorney for Applicant(s) Date of Signature

Respectfully submitted,



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